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Claims

What is claimed is:

1. A videoconference system, comprising:

5 terminals;

multipoint control units, as the superior level for the terminals, for controlling the corresponding terminals to participate in the videoconference;

10 conference management systems, as the superior level for the multipoint control units, for managing resource allocation of the corresponding subordinate multipoint control units to meet subscribers' demand, and performing conference dispatching and control for the local conference site; and

15 conference coordination systems, as the superior level for the conference management systems, for coordinating corresponding subordinate conference management systems and the neighboring conference coordination systems to perform dispatching and control for the entire conference at a dispatching request.

20 2. The videoconference system according to claim 1, wherein each conference coordination system comprises:

a system management module, for accomplishing system configuration and operating management of the conference coordination system;

25 a conference dispatching module, for processing conference dispatching requests from the subordinate conference management systems or from the neighboring conference coordination systems;

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a conference control module, for forwarding conference control data; and

5 a multipoint communication module, for communicating with the subordinate conference management systems and the neighboring conference coordination systems.

10 3. The videoconference system according to claim 2, wherein the models between the conference coordination systems and the subordinate conference management systems as well as between the conference coordination systems are based on the International Organization for Standardization 7-layer model for communication, with the International Telecommunications Union transport service ITU-T X.224 below the transport layer.

15 4. The videoconference system according to claim 3, wherein the multipoint communication data in the multipoint communication module comprises source node ID, channel ID, list of destination nodes, upper layer application data and application data segment mark, and the conference coordination systems implement routing strategy by using the channel ID and list of destination nodes in the multipoint communication data.

20 5. The videoconference system according to claim 2, wherein the system configuration of each system management module comprises:

the terminals being numbered uniformly;

25 the conference management system being configured with number segments to determine corresponding terminals; and

the conference coordination systems being configured with number segments managed by the corresponding conference management systems and number segments managed by the

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neighboring conference coordination systems, so as to determine
a plurality of conference management systems involved in the
conference in accordance with the system configuration, split
the conference into sub-conferences, and distribute the
5 sub-conferences to each corresponding subordinate conference
management system during a videoconference.

6. The videoconference system according to claim 5, wherein
during a videoconference, the conference coordination systems
determine a master conference management system and a slave
10 conference management system dynamically in accordance with the
system configuration and dispatching strategy.

7. The videoconference system according to claim 6, wherein
one of the subordinate multipoint control units managed by the
master conference management system serves as the master
15 multipoint control unit, the other multipoint control units in
the master conference management system and the multipoint
control units in the slave conference management system serve
as slave multipoint control units, and the master conference
management system accomplishes cascading among the master and
20 slave multipoint control units.

8. The videoconference system according to claim 6, wherein
the dispatching strategy of the conference coordination systems
is to determine the master conference management system in
accordance with the number of terminals managed by the
25 conference management systems and to determine whether to merge
the sub-conferences into the master conference management
system in accordance with the number of sub-conferences.

9. The videoconference system according to claim 2, wherein

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the conference control data comprises conference state data and conference control commands.

10. The videoconference system according to claim 9, wherein the conference state data refers to the data reported by each conference management system to the corresponding superior conference coordination system and forwarded by the conference coordination system to other conference management systems during the videoconference, including start/end of conference, entering/leaving of conference site, or change of chairman token.

11. The videoconference system according to claim 9, wherein the conference control commands comprise prolongation/ending of conference, calling/hanging up/adding/deleting/broadcasting/viewing of conference site, and setting of multi-vision.

12. The videoconference system according to claim 1, wherein the dispatching request refers that a subscriber requests for conference dispatching from the conference management system where the account number of the conference caller is, including start time, duration of the conference and terminals involved in the conference.

13. The videoconference system according to claim 1, wherein the conference coordination systems are embedded in the conference management systems.

25 14. A videoconference system management method, comprising the steps of:

- 1) the subscriber requesting for conference dispatching

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from the home conference management system;

2) the home conference management system managing the corresponding local conference site directly at the dispatching request, and transferring the dispatching across conference management systems to the corresponding conference coordination system; and

3) the conference coordination system dispatching the corresponding master and slave conference management systems at the dispatching request.

10 15. The videoconference system management method according to claim 14, wherein step 3) further comprises the steps of:

31) the conference coordination system determining each terminal's home conference management system;

32) the conference coordination system splitting the videoconference into sub-conferences and distributing the sub-conferences to each corresponding conference management system;

33) the conference coordination system determining a master conference management system and a plurality of slave conference management systems.

20 16. The videoconference system management method according to claim 14 or 15, further comprising the following steps before step 1):

numbering the terminals in the videoconference uniformly;
25 configuring the conference management systems with number segments to determine corresponding terminals;
configuring the conference coordination systems with number segments managed by the corresponding conference management

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systems and number segments managed by the neighboring conference coordination systems, so that the conference coordination systems can perform dispatching in accordance with the corresponding managed number segments.

5 17. The videoconference system management method according to claim 14, further comprising the following step between step 2) and step 3):

the conference coordination system dispatching the corresponding neighboring conference coordination systems.

10 18. The videoconference system management method according to claim 14, further comprising the following steps after step 3):

4) the master and slave conference management systems feeding the dispatching result back to the corresponding conference coordination system;

5) the conference coordination system feeding the final dispatching result back to the home conference management system that sent the dispatching request.

20 19. The videoconference system management method according to claim 14, wherein the home conference coordination system refers to the conference management system where the account number of the videoconference caller is.

25 20. The videoconference system management method according to claim 14, wherein during the conference dispatching, the conference coordination systems perform control of the conference in accordance with conference control data, which comprises conference state data and conference control commands.

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21. The videoconference system management method according to claim 14, wherein the conference coordination systems perform conference dispatching with reference to the dispatching strategy which is to determine the master conference management system in accordance with the number of terminals managed by each conference management system and determine whether to merge the sub-conferences into the master conference management system in accordance with the number of sub-conferences.

10 22. The videoconference system management method according to claim 14, wherein the dispatching request refers that the subscriber requests for conference dispatching from the conference management system where the account number of the conference caller is, including start time and duration of the
15 conference and terminals involved in the conference.